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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/821,182	04/09/2004	Jeong-Hoon Choi	P-0670	8416

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EXAMINER	
CHURNET, DARGAYE H	
ART UNIT	PAPER NUMBER
2616	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/821,182	CHOI, JEONG-HOON	
	Examiner	Art Unit	
	Dargaye H. Churnet	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11,17 and 19-21* is/are rejected.

7)☒ Claim(s) *12-16 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☒ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Smith (cited 6,349,097 B1).

For claim 1, Smith discloses a method for reducing overall network delays and efficient management of ATM resources, the method comprising: adding an α Byte of routing information to a front portion of an ATM cell header when processing a cell having end destination information (see col. 11 line 62 – col. 12, line 3, wherein the routing tag is the α Byte attached to the front of the ATM cell, including destination address information), so that the destination information is not lost, allowing interfacing between each network element to perform cell processing and routing operations with a single cell switching operation (see col. 19, lines 6-11, wherein the switching unit uses the routing tag to perform self-routing between input and output network elements in a single operation).

2. Claims 2-6, 11, 19, and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Heiman (cited 6,647,017 B1).

For claim 2, Heiman discloses a method of switching an asynchronous transfer mode (ATM) cell having a payload portion and a header portion comprising: adding an information field before the header portion of the ATM cell (see col. 7, lines 29-32, wherein three identifier fields, including a routing tag, are inserted to the ATM cell); processing the ATM cell having a total of more than 53 bytes (see col. 7, lines 27-32, wherein the ATM cell is 53 bytes and the identifiers are added to the cell to make it more than 53 bytes); and forwarding the ATM cell after the information field is removed (see col. 7, lines 29-32, wherein the identifiers are removed at the switch, and then output to the destination).

For claim 3, Heiman discloses the ATM cell during processing has (53+ α) bytes, and α is a size of the information field (see fig. 5 and col. 7, lines 27-32, wherein the ATM cell is 53 bytes and the identifiers are added to the cell to make it more than 53 bytes).

For claim 4, Heiman discloses information regarding an end destination of the ATM cell is included in the information field (see col. 7, lines 36-39, wherein the routing tag provides the switch with destination information in the form of the correct output port).

For claim 5, Heiman discloses a method of processing an asynchronous transfer mode (ATM) cell comprising: performing cell switching on a received ATM cell (see col. 6, lines 45-48, wherein the switching element performs cell switching); adding routing information in front of a header of the ATM cell that has been switched (see col. 7, lines 29-32, wherein three identifier fields, including a routing tag, are inserted to the ATM cell in front of the header); and forwarding the ATM cell according to the added routing information without any further cell switching (see col. 7, lines 36-39, wherein the routing tag provides the switch with destination information to forward the cell).

For claim 6, Heiman discloses the received ATM cell has a size of 53 bytes (see col. 7, lines 29-32, wherein the identifiers are removed at the switch, and then output to the destination, so the destination receives the original ATM cell with a size of 53 bytes).

For claim 11, Heiman discloses an asynchronous transfer mode (ATM) cell switching system comprising: a first memory to receive and store an ATM cell to be handled (see col. 8, lines 2-5, wherein the first memory of the switching element is the input buffer); a cell switching unit to receive the ATM cell stored in the first memory, and to assign an appropriate path for the ATM cell to be forwarded to (see col. 8, lines 10-11, wherein cells are sent to the switching unit); and a cell processor to receive and process the ATM cell from the cell switching unit, and to output the ATM cell without

going through the cell switching unit (see col. 8, lines 17-21, wherein the reading unit receives cells from the switching unit and processes them to the correct output line).

For claim 19, Heiman discloses an asynchronous transfer mode (ATM) cell format used during cell switching comprising: a payload (see col. 7, line 28, wherein the ATM cell contains a 48 byte payload); a header in front of the payload (see col. 7, line 29, wherein the ATM cell contains a 5 byte header); and an information field in front of the header, the information field containing an end destination for the payload (see fig. 5 routing tag and col. 7, lines 36-39, wherein the routing tag provides the switch with destination information in the form of the correct output port). Claim 21 is rejected for similar reasons.

Claim Rejections - 35 USC § 103

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7, 8, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heiman in view of Smith.

For claim 7, Heiman fails to disclose the added routing information has a size of 1 byte. Smith from the same or similar fields of endeavor teaches the added routing information has a size of 1 byte (see col. 11, lines 62-66, wherein the routing tag is a single byte). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to incorporate the elements above stated by Smith in the network of Heiman. The method taught by Smith is modified/implemented into the network of Heiman by using a routing tag as the single identifier. The motivation for the added routing information has a size of 1 byte is that both inventions disclose the addition of a routing tag to an ATM cell. Claim 20 is rejected for similar reasons.

For claim 8, Heiman discloses the forwarded ATM cell has a size of 53 bytes, after the 1 byte routing information has been removed (see col. 7, lines 29-32, wherein the identifiers are removed at the switch, and then output to the destination, so the destination receives the original ATM cell with a size of 53 bytes).

For claim 17, Heiman fails to disclose the cell switching unit requiring a one virtual path identifier/virtual channel identifier (VPI/VCI) and one type of routing information for any received ATM cell. Smith from the same or similar fields of endeavor teaches the cell switching unit requiring a one virtual path identifier/virtual channel identifier (VPI/VCI) and one type of routing information for any received ATM cell (see col. 8, lines 27-31, wherein each received ATM cell carries a VPI/VCI along with routing information). Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to incorporate the elements above stated by Smith in the network of Heiman. The method taught by Smith is modified/implemented into the network of Heiman by switching standard ATM cells. The motivation for the cell switching unit requiring a one virtual path identifier/virtual channel identifier (VPI/VCI) and one type of routing information for any received ATM cell is that it is standard for ATM cells to carry a VPI/VCI along with routing information.

5. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heiman in view of Jeon et al. (5,701,300).

For claim 9, Heiman fails to disclose including a step of processing the ATM cell before forwarding. Jeon et al. from the same or similar fields of endeavor teach including a step of processing the ATM cell which can be placed before a forwarding step (see col. 10, lines 1-6, wherein the processing step is the changing of the ATM adaptation layer). Thus, it would have been obvious to the person of ordinary skill in the

art at the time of the invention to incorporate the elements above stated by Jeon et al. in the network of Heiman. The method taught by Jeon et al. is modified/implemented into the network of Heiman by changing the ATM adaptation layer before forwarding the ATM cell. The motivation for including a step of processing the ATM cell before forwarding is that both inventions deal with ATM switching. Claim 10 is rejected for similar reason.

Allowable Subject Matter

6. Claims 12-16 and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. These references include Nakano et al. (cited 5,557,621) and Kumar et al. (cited 6,519,226 B1), which both describe ATM cell switching.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dargaye H. Churnet whose telephone number is 571-270-1417. The examiner can normally be reached on Monday-Friday from 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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